THE CITY OF SAN DIEGO

MANAGER'S REPORT

DATE ISSUED: July 23, 2003 REPORT NO: 03-158

ATTENTION: Public Safety and Neighborhood Services Committee
Agenda of July 30, 2003

SUBJECT: Fire-Rescue Department Fleet Status

SUMMARY

THIS IS AN INFORMATION ITEM ONLY. NO ACTION IS REQUIRED ON THE PART OF THE COMMITTEE OR THE CITY COUNCIL.

BACKGROUND

During the City Council meeting of June 9, 2003, regarding the fiscal year 2004 proposed budget, San Diego Fire-Rescue Department (SDFD) was directed to return to the Public Safety and Neighborhood Services Committee regarding the status of the fleet.

San Diego Fire-Rescue Department continues to be unable to sustain an adequate emergency response marine and fire fleet. Budgetary constraints over the past several years have repeatedly eliminated any proposed fleet replacement programs. SDFD purchased twelve engines, three trucks and one multi-purpose fire-rescue vessel in FY 2002, and two aerial ladder trucks, one heavy rescue, one hazardous materials, two light and air, and four wildland apparatus are scheduled for purchase in FY 2004. These purchases increase the dependability of the fleet, but are merely a partial filling of an Apparatus Replacement Program that has been largely discontinued. The Lifeguard fleet has never had a sustainable program to insure timely replacement of their marine rescue vessels and support fleet. Unfortunately, in times of budgetary challenges and with limited Fire-Rescue discretionary funds, new vehicles and vessels quickly become unaffordable.

In addition, the operating conditions for the emergency fire and lifeguard fleet create an environment that shortens the reasonable life span of the equipment. For the Fire fleet, quick starts, lack of a warm-up period, and high-speed short runs lead to major repairs at relatively low mileage. Over time, operating conditions often produce serious metal

fatigue problems requiring expensive welding or replacement of essential structural components. For the Lifeguard fleet, the wear and tear placed on rescue units is extremely demanding due to heavy use and the conditions associated with operating in a marine environment, i.e., sand, salt water and heavy pounding from ocean waves and swells.

To insure a reliable and dependable emergency response fleet to handle fire, medical and marine emergencies, a sustainable replacement plan needs to be developed and funded.

DISCUSSION

Ongoing efforts to improve the condition of the Fire-Rescue fleet have been challenging. Numerous times, efforts have been made to establish a dependable Fire Apparatus Replacement Program, but none has been sustainable. As a result, SDFD remains in a continual cycle of operating our fleet beyond recommended life span. In 2000, DMG Maximus conducted a City of San Diego Fleet Replacement Study and recommended as a guideline the City fleet on average should be replaced every seventy-eight months (6 ½ years). The basic conditions leading to the findings of this study continue to exist today.

FIRE FLEET

The National Fire Protection Association (NFPA) recommends front-line fire apparatus be limited to twelve years of service, and all apparatus be removed after twenty-four years of service. Forty one percent of Fire-Rescue's front-line emergency vehicles are beyond the twelve-year recommended standard. Nine percent of the emergency fleet is beyond the twenty-four year standard. Although not included in the NFPA recommendation, forty-eight percent of the support fleet is beyond twelve years old.

Fire-Rescue currently has seven wildland apparatus built in 1978 and 1980. These apparatus have outside seating for the firefighters while the captain and engineer are in an enclosed cab. Several of these apparatus seat the firefighters at the rear of the vehicle where they are out of sight of the captain and engineer. This situation is unsafe and these vehicles are unacceptable for use outside of the city on state and county strike teams. Four of these vehicles will be replaced when the wildland apparatus purchased in FY 2004 are received and outfitted. However, this still leaves three wildland apparatus as front-line vehicles that are inadequate based on today's safety standards. There are two water tenders that support the fleet during major brush fires that were purchased in 1978 and are due for replacement within the next several years (see attachment – Fire Replacement Program).

As identified by DMG Maximus, the age and condition of the fleet creates tremendous maintenance problems. There are requirements for increased maintenance infrastructure, including additional repair space, staff, and funding for parts and labor. An aging fleet results in increased downtime creating the need for a larger reserve fleet. Due to the age and current wear issues, the fire fleet requires a reserve apparatus ratio of three to one. In addition, maintenance of the required reserve vehicles to support the front-line fleet

becomes very costly. The annual aerial ladder safety inspections mandate numerous and expensive repairs to trucks which range from six to twenty-three years old. These extensive repairs create a situation where reserve trucks are unavailable for extended periods of time.

To address the issues surrounding funding, purchase, and long-term maintenance of our vehicles, SDFD is considering developing an all-encompassing request for proposal (RFP) to seek interested apparatus manufacturers who would be willing to partner with our city and department in an entrepreneurial approach to fire apparatus replacement and repair.

The concept of purchasing or lease-purchasing fire apparatus, and then owning and maintaining them for twenty years is a very costly endeavor. Drive train, pump, chassis, body, and aerial repairs can be extremely expensive, both in parts and labor. The subsequent out-of-service time is another issue that has a significant impact on fire operations.

It is proposed that the department and city convene an interdepartmental work group to study the feasibility of a ten-year program to:

1. Lease fire apparatus for a duration of five years, with one-fifth of the fleet replaced every year, including reserves, with option to continue the ten-year program in increments of five years

2. Develop a joint-use repair and warranty facility specifically for use to repair SDFD vehicles, but also to be used as a countywide service and warranty facility

Annual lease payments may actually be higher than present costs associated with the City's Master Lease Purchase program, but the annual lease payments would become a line item in the base budget, thereby ensuring continuity of the program. The off-setting reduction in parts accrual, salaries and wages for mechanics, and repair facility operational costs should provide cost mitigation and operational efficiencies. The feasibility study should prove this concept out.

LIFEGUARD FLEET

The Lifeguard Service uses a multitude of vehicles and vessels to patrol the coastline and Mission Bay. The vehicles and vessels are specially designed and outfitted to transport emergency equipment and lifeguards to a wide variety of rescue scenarios including water rescues, search and rescue missions, coastal cliff rescues, in-surf rescue operations, marine firefighting, dewatering of sinking vessels, river rescues and boat tows.

VESSELS

Surf Rescue Vessel Hull

The surf rescue vessels are the primary tool used to patrol and enforce boating safety and laws on Mission Bay, and perform patrol and rescues along our coastline. Their quick speeds and maneuverability allow the vessels to access all areas of Mission Bay, including shallow areas. The vessels perform vessel tows and rescues, and serve as the controlling authority and information source for all boaters.

The current surf rescue fleet is beyond its serviceable life. The hulls of these vessels endure tremendous pounding from the ocean waves and swells, and are used as the primary "work boat" for the Boating Safety Unit. In recent years, the seven-year replacement schedule has not been adhered to due to budgetary constraints. Of the seven rescue vessels, six are due for replacement (see attachment – Lifeguard Replacement Program).

Surf Rescue Vessel Motors

The surf rescue vessels are powered by 225 horsepower outboard motors, which require constant care and maintenance. These 4-stroke motors are environmentally sensitive and are considered state-of-the art for marine outboard motors.

Based on experience, these motors require full refurbishing or replacement every 1,500 hours, which is the equivalent of every two years. This replacement schedule will allow for a quality motor that is responsive to the demanding public safety and lifeguard personnel needs placed on the vessels.

Lifeguard Services require nine outboard motors to operate the fleet. Of the nine outboard motors, eight are due for replacement (see attachment – Lifeguard Replacement Program).

Personal Watercraft (PWC)

Lifeguard Services has a need to use small "in surf vessels" to make life saving rescues and control the bathing and surfing crowd. In 2002, Lifeguard Services began purchasing new 4-stroke PWCs which allowed for a more reliable rescue craft along with a cleaner burning engine. The 4-stroke PWCs are in use constantly and require replacement every two years. Currently, there is a need to replace seven PWCs which will phase out all the 2-stroke PWCs along with the older 4-stroke units (see attachment – Lifeguard Replacement Program).

Fire-Rescue Vessel Motors

The fire-rescue vessels are powered by two inboard drive engines and one pump engine able to dewater a sinking vessel and charge fire hose lines for marine fire fighting. Currently, there is a new fire-rescue vessel under construction that will be equipped with three new motors. The other primary fire-rescue vessel has recently been re-powered with three new motors.

However, the fire-rescue fleet does not have replacement motors in the event one of the motors experiences malfunction or other mechanical problems. In order to maintain a proper emergency response contingency plan, there is a need to purchase three additional inboard motors (see attachment – Lifeguard Replacement Program).

VEHICLES

All Terrain Vehicles (ATVs)

The ATVs are used primarily in the spring, summer and fall months as a smaller, more maneuverable vehicle when beaches are crowded. ATVs carry basic life saving equipment for medical aids and water rescues, and allow for the transportation of numerous lifeguards throughout the day without the use of the larger vehicles.

Lifeguard Services require eight ATVs. Based on constant use and historic maintenance issues, ATVs should be replaced every two years. Of the eight ATVs, six are currently due for replacement (see attachment – Lifeguard Replacement Program).

Trailers

Additional Lifeguard support equipment consists of the trailers used to service the vehicles and vessels listed in this report. Lifeguard Services utilizes thirteen trailers to transport PWCs and surf rescue vessels. All trailers exist in the marine environment and are exposed to salt water and sand and are generally stored outside due to lack of space. The replacement schedules for the trailers are based on their function and durability. Based on the topography of the beach, two types of trailers are used to launch PWCs. One type has a replacement schedule of seven years while the other type requires replacement every two years. There are ten trailers currently in need of replacement (see attachment – Lifeguard Replacement Program).

Front-line Vehicles

On November 12, 2003, the City Council approved a Marketing Partnership Agreement with General Motors Corporation, which included a complete replacement of the existing vehicle fleet used within the Lifeguard Service. The twenty-nine new vehicles consist of four suburbans, fourteen trail blazers and eleven S-10 pickups. General Motors Corporation has an option in 2005 to extend the agreement an additional two years. The

City Council shall review the agreement before it is extended (R-297293). This private/public partnership has been beneficial to all parties involved.

Specialty Vehicles

The Lifeguard Service also has three specialty vehicles. One is specifically designed for cliff and river rescues. Another is used at a remote beach in La Jolla where there are no facilities or running water. The last specialty vehicle is used by the mechanics to tow trailers and equipment. All of these vehicles are expected to be replaced by the Equipment Division of the City of San Diego. Lifeguard Services pay regular usage and assignment fees to fund these replacements.

CONCLUSION:

The above information is provided as an overview of San Diego Fire-Rescue's current fleet status, per the request made by Councilmember Zucchet during the FY 2004 budget hearing. In addition, the concept of a feasibility study to partner with an apparatus manufacturer for a ten-year replacement and repair program is proposed as a potential solution.

Respectfully submitted,

_____	Approved by: _____
Jeff Bowman	P. Lamont Ewell
Fire Chief	Assistant City Manager

TKJ

Note: The attachments are not available in electronic format. A copy is available for review in the Office of the City Clerk.

Attachments:
1. Fire-Rescue Fire Ten-Year Replacement Program
2. Fire-Rescue Lifeguard Ten-Year Replacement Program